**WSA5:**

```
Tracing route to gaia.cs.umass.edu [128.119.245.12]
over a maximum of 30 hops:

  1     5 ms     2 ms     2 ms  modem.home [192.168.1.1]
  2     9 ms     5 ms     5 ms  10.76.0.1
  3    11 ms     6 ms     6 ms  10.36.117.186
  4     9 ms     7 ms     6 ms  172.16.197.122
  5    10 ms     7 ms     5 ms  172.16.210.210
  6    10 ms     7 ms     6 ms  172.16.210.225
  7    10 ms     9 ms     6 ms  172.16.194.99
  8    15 ms    11 ms    10 ms  10.40.155.161
  9     *       15 ms     *     10.40.141.73
 10    16 ms     7 ms     7 ms  10.40.170.219
 11    50 ms    48 ms    47 ms  ae4.cr2-ank1.ip4.gtt.net [67.220.148.193]
 12   135 ms   133 ms   131 ms  et-0-0-1.cr1-bos1.ip4.gtt.net [89.149.136.78]
 13   138 ms   134 ms   135 ms  ip4.gtt.net [65.175.24.206]
 14   138 ms   135 ms   134 ms  69.16.1.0
 15   138 ms   137 ms   134 ms  core1-rt-et-8-3-0.gw.umass.edu [192.80.83.109]
 16   139 ms   139 ms   142 ms  n1-rt-1-1-et-0-0-0.gw.umass.edu [128.119.0.216]
 17   141 ms   140 ms   140 ms  128.119.7.74
 18   141 ms   139 ms   141 ms  128.119.7.66
 19   141 ms   138 ms   138 ms  core1-rt-et-7-2-1.gw.umass.edu [128.119.0.217]
 20   139 ms   139 ms   148 ms  n5-rt-1-1-xe-2-1-0.gw.umass.edu [128.119.3.33]
 21   141 ms   140 ms   139 ms  cics-rt-xe-0-0-0.gw.umass.edu [128.119.3.32]
 22   139 ms   142 ms   136 ms  nscs1bbs1.cs.umass.edu [128.119.240.253]
 23   143 ms   140 ms   140 ms  gaia.cs.umass.edu [128.119.245.12]

Trace complete.

C:\Users\USER>
```

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 286 | 92.563509 | 128.119.3.32 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 287 | 92.564820 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 288 | 92.704947 | 128.119.3.32 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 289 | 92.706420 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 290 | 92.845181 | 128.119.3.32 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 291 | 93.716528 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 296 | 93.856088 | 128.119.240.253 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 297 | 93.857588 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 298 | 93.999449 | 128.119.240.253 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 299 | 94.001854 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 300 | 94.138523 | 128.119.240.253 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 301 | 95.010277 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 302 | 95.153472 | 128.119.245.12 | 192.168.1.25 | ICMP | 106 | Echo (ping) reply |
| 303 | 95.154825 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 304 | 95.295020 | 128.119.245.12 | 192.168.1.25 | ICMP | 106 | Echo (ping) reply |
| 305 | 95.296424 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 306 | 95.436679 | 128.119.245.12 | 192.168.1.25 | ICMP | 106 | Echo (ping) reply |

> Frame 6: 106 bytes on wire (848 bits), 106 bytes captured (848 bits) on interface
> Ethernet II, Src: LiteonTe_e0:ed:b3 (e4:aa:ea:e0:ed:b3), Dst: HuaweiTe_53:78:6a (9
> Internet Protocol Version 4, Src: 192.168.1.25, Dst: 128.119.245.12
> Internet Control Message Protocol

```
0000  94 25 33 53
0010  00 5c 10 cd
0020  f5 0c 08 00
0030  00 00 00 00
0040  00 00 00 00
0050  00 00 00 00
0060  00 00 00 00
```

Internet Control Message Protocol: Protocol    Paketler: 306 · Görüntülenen: 210 (68.6%)    Profil: Default

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 6 | 1.918241 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 7 | 1.923926 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live |
| 8 | 1.925125 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 9 | 1.927852 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live |
| 10 | 1.928633 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 11 | 1.930733 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live |
| 12 | 1.932477 | 192.168.1.25 | 192.168.1.1 | DNS | 84 | Standard quer |
| 13 | 1.935201 | 192.168.1.1 | 192.168.1.25 | DNS | 108 | Standard quer |
| 16 | 2.942869 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 17 | 2.952094 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live |
| 18 | 2.953586 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 19 | 2.958959 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live |
| 20 | 2.959691 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 21 | 2.964664 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live |
| 22 | 2.965770 | 192.168.1.25 | 192.168.1.1 | DNS | 82 | Standard quer |
| 23 | 2.975294 | 192.168.1.1 | 192.168.1.25 | DNS | 132 | Standard quer |
| 24 | 3.384304 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NB |
| 25 | 4.886635 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NB |
| 26 | 6.388681 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NB |
| 27 | 8.903036 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 28 | 8.914160 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | Time-to-live |
| 29 | 8.915579 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 30 | 8.922336 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | Time-to-live |
| 31 | 8.923127 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 32 | 8.928987 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | Time-to-live |
| 33 | 8.930515 | 192.168.1.25 | 192.168.1.1 | DNS | 86 | Standard quer |
| 34 | 8.940152 | 192.168.1.1 | 192.168.1.25 | DNS | 136 | Standard quer |
| 35 | 9.343733 | 192.168.1.25 | 10.36.117.186 | NBNS | 92 | Name query NB |
| 36 | 10.858356 | 192.168.1.25 | 10.36.117.186 | NBNS | 92 | Name query NB |
| 37 | 12.366555 | 192.168.1.25 | 10.36.117.186 | NBNS | 92 | Name query NB |
| 38 | 14.870311 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) r |
| 39 | 14.879568 | 172.16.197.122 | 192.168.1.25 | ICMP | 70 | Time-to-live |

> Frame 12: 84 bytes on wire (672 bits), 84 bytes captured (672 bits) on interface \Device\
> Ethernet II, Src: LiteonTe_e0:ed:b3 (e4:aa:ea:e0:ed:b3), Dst: HuaweiTe_53:78:6a (94:25:33
> Internet Protocol Version 4, Src: 192.168.1.25, Dst: 192.168.1.1
> User Datagram Protocol, Src Port: 64544, Dst Port: 53
> Domain Name System (query)

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 6 | 1.918241 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 7 | 1.923926 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Tim |
| 8 | 1.925125 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 9 | 1.927852 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Tim |
| 10 | 1.928633 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 11 | 1.930733 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Tim |
| 12 | 1.932477 | 192.168.1.25 | 192.168.1.1 | DNS | 84 | Star |
| 13 | 1.935201 | 192.168.1.1 | 192.168.1.25 | DNS | 108 | Star |
| 16 | 2.942869 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 17 | 2.952094 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Tim |
| 18 | 2.953586 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 19 | 2.958959 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Tim |
| 20 | 2.959691 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 21 | 2.964664 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Tim |
| 22 | 2.965770 | 192.168.1.25 | 192.168.1.1 | DNS | 82 | Star |
| 23 | 2.975294 | 192.168.1.1 | 192.168.1.25 | DNS | 132 | Star |
| 24 | 3.384304 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Nam |
| 25 | 4.886635 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Nam |
| 26 | 6.388681 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Nam |
| 27 | 8.903036 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo |
| 28 | 8.914160 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | |

> Frame 7: 134 bytes on wire (1072 bits), 134 bytes captured (1072 bits) on interf
> Ethernet II, Src: HuaweiTe_53:78:6a (94:25:33:53:78:6a), Dst: LiteonTe_e0:ed:b3
> Internet Protocol Version 4, Src: 192.168.1.1, Dst: 192.168.1.25
    0100 .... = Version: 4
    .... 0101 = Header Length: 20 bytes (5)
> Differentiated Services Field: 0xc0 (DSCP: CS6, ECN: Not-ECT)
    Total Length: 120
    Identification: 0x3879 (14457)
> 000. .... = Flags: 0x0
    ...0 0000 0000 0000 = Fragment Offset: 0
    Time to Live: 64
    Protocol: ICMP (1)
    Header Checksum: 0xbde1 [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 192.168.1.1
    Destination Address: 192.168.1.25

The IP address of my computer: 192.168.1.25

The value in the TTL field in this IPv4 datagram's header: 64

In the IP header, there are 20 bytes.

The value in the upper layer protocol field in this IPv4 datagram's header is 0x1.

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 6 | 1.918241 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 7 | 1.923926 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded |
| 8 | 1.925125 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 9 | 1.927852 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded |
| 10 | 1.928633 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 11 | 1.930733 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded |
| 12 | 1.932477 | 192.168.1.25 | 192.168.1.1 | DNS | 84 | Standard query 0x707c |
| 13 | 1.935201 | 192.168.1.1 | 192.168.1.25 | DNS | 108 | Standard query respons |
| 16 | 2.942869 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 17 | 2.952094 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 18 | 2.953586 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 19 | 2.958959 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 20 | 2.959691 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 21 | 2.964664 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded |
| 22 | 2.965770 | 192.168.1.25 | 192.168.1.1 | DNS | 82 | Standard query 0x27aa |
| 23 | 2.975294 | 192.168.1.1 | 192.168.1.25 | DNS | 132 | Standard query respons |
| 24 | 3.384304 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00 |
| 25 | 4.886635 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00 |
| 26 | 6.388681 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00 |
| 27 | 8.903036 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request |
| 28 | 8.914160 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | Time-to-live exceeded |

```
  > Time to Live: 1
    Protocol: ICMP (1)
    Header Checksum: 0x718f [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 192.168.1.25
    Destination Address: 128.119.245.12
v Internet Control Message Protocol
    Type: 8 (Echo (ping) request)
    Code: 0
    Checksum: 0xf785 [correct]
    [Checksum Status: Good]
    Identifier (BE): 1 (0x0001)
    Identifier (LE): 256 (0x0100)
    Sequence Number (BE): 121 (0x0079)
    Sequence Number (LE): 30976 (0x7900)
  > [No response seen]
  > Data (64 bytes)
```

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 6 | 1.918241 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 7 | 1.923926 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded (Tim |
| 8 | 1.925125 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 9 | 1.927852 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded (Tim |
| 10 | 1.928633 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 11 | 1.930733 | 192.168.1.1 | 192.168.1.25 | ICMP | 134 | Time-to-live exceeded (Tim |
| 12 | 1.932477 | 192.168.1.25 | 192.168.1.1 | DNS | 84 | Standard query 0x707c PTR |
| 13 | 1.935201 | 192.168.1.1 | 192.168.1.25 | DNS | 108 | Standard query response 0x |
| 16 | 2.942869 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 17 | 2.952094 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded (Tim |
| 18 | 2.953586 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 19 | 2.958959 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded (Tim |
| 20 | 2.959691 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 21 | 2.964664 | 10.76.0.1 | 192.168.1.25 | ICMP | 70 | Time-to-live exceeded (Tim |
| 22 | 2.965770 | 192.168.1.25 | 192.168.1.1 | DNS | 82 | Standard query 0x27aa PTR |
| 23 | 2.975294 | 192.168.1.1 | 192.168.1.25 | DNS | 132 | Standard query response 0x |
| 24 | 3.384304 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00><00 |
| 25 | 4.886635 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00><00 |
| 26 | 6.388681 | 192.168.1.25 | 10.76.0.1 | NBNS | 92 | Name query NBSTAT *<00><00 |
| 27 | 8.903036 | 192.168.1.25 | 128.119.245.12 | ICMP | 106 | Echo (ping) request  id=0x |
| 28 | 8.914160 | 10.36.117.186 | 192.168.1.25 | ICMP | 110 | Time-to-live exceeded (Tim |

```
> Frame 6: 106 bytes on wire (848 bits), 106 bytes captured (848 bits) on interface \Device\NPF_{DC50A74
> Ethernet II, Src: LiteonTe_e0:ed:b3 (e4:aa:ea:e0:ed:b3), Dst: HuaweiTe_53:78:6a (94:25:33:53:78:6a)
v Internet Protocol Version 4, Src: 192.168.1.25, Dst: 128.119.245.12
    0100 .... = Version: 4
    .... 0101 = Header Length: 20 bytes (5)
  > Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
    Total Length: 92
    Identification: 0x10cd (4301)
  > 000. .... = Flags: 0x0
    ...0 0000 0000 0000 = Fragment Offset: 0
  > Time to Live: 1
    Protocol: ICMP (1)
    Header Checksum: 0x718f [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 192.168.1.25
    Destination Address: 128.119.245.12
> Internet Control Message Protocol
```

72  bytes are in the payload of the IP datagram. Total length is 92 bytes.

The fragment offset is zero.